Section 2
Municipal Component

2.0 Overview

The City of Carlsbad Municipal Facilities are composed of administration buildings, recreational areas, buildings, maintenance yards, water reservoirs, water pump stations, sewer lift stations, a road system, parking facilities, the storm drain system, pressure regulator vaults, and fire stations. These are areas where Municipal staff work or provide a specific service. This section discusses Permit requirements that apply to the Municipal Component (areas and activities) of the Jurisdictional Urban Runoff Management Plan (JURMP) and compliance actions proposed by the City of Carlsbad. This section meets or exceeds minimum requirements as specified in Section H of the Permit. The following subsections address short and long-term impacts from urban runoff at the Municipal facilities including activities to minimize impacts on receiving water quality:

- Pollution Prevention (Section 2.1)
- Source Identification (Section 2.2)
- Threat to Water Quality Prioritization (Section 2.3)
- Best Management Practices Implementation (Section 2.4)
- Maintenance of Municipal Separate Storm Sewer System (Section 2.5)
- Management of Pesticides, Herbicides, and Fertilizers (Section 2.6)
- Inspections of Municipal Areas and Activities (Section 2.7)
- Enforcement of Municipal Areas and Activities (Section 2.8)

Subsections 2.1 through 2.8 use a table format to briefly summarize the purpose of the subsection, quote the applicable regulatory requirements from Sections F and H of the Permit (*italicized*), and list the City's compliance action(s). The rest of the subsection outlines in detail each compliance action and describes the specific actions completed, in progress, or projected due to capital improvement purchases by the City to meet or exceed that Permit requirement.

Status of each part of the Municipal Component is presented using spreadsheet programming. Information is linked to additional worksheets providing access to information for actions that require or have implementation. Where appropriate, a compliance action with associated percentage goals indicates improvements during the 5-year permit term.

The types of information that should be collected for use in preparing the Annual Report and Assessment/Evaluation of the JURMP is outlined in Section 11 of this JURMP, Assessment of Jurisdictional URMP Effectiveness Component.

2.1 Pollution Prevention

2.1.1 Purpose and Permit Requirements

Purpose

The purpose of this Permit requirement is to evaluate the pollution prevention opportunities applicable to the municipal facilities for preventing or reducing pollutants from entering the storm drain system.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Municipal Component for Pollution Prevention is as follows:

Section F.3.a.(1)
Each Copermittee shall implement pollution prevention methods in its Municipal (Existing Development) Component and shall require its use by appropriate municipal departments and personnel, where appropriate.

Jurisdictional URMP Requirements

The Permit requirement under the Municipal Component for Pollution Prevention is as follows:

Section H.1.a.(2)(a)
Which pollution prevention methods will be required for implementation, and how and where they will be required.

City Actions

1) Develop a list of pollution prevention opportunities for each type of municipal facility.
2) Develop a training program for City of Carlsbad staff on the requirements of their JURMP.

2.1.2 Pollution Prevention Actions

<u>Action #1</u> - Develop a list of pollution prevention opportunities for each type of municipal facility.

There are four key components to an effective pollution prevention program and a fifth component added for storm water. Implementing the following five "Rs" will assist in identifying the pollution prevention opportunities for Municipal Facilities. The definitions of these terms are as follows:

- Reduce – BEFORE generating a waste stream, minimize the quantity or toxicity of the waste by substituting nontoxic chemicals.
- Reuse – Material, unwanted in one area, may be used for its intended purpose in another area.
- Recycle – Take used materials, reprocess, and produce a useful product in the same or other form.
- Rebuy – Purchase a product that contains recycled-content materials.
- Redirect – Divert the flow of storm water to reduce or eliminate contact with potential pollution. Move storm water around direct contact with known pollutants.

Based on each Municipal Facility's location, outdoor areas, and specific activities, the City has developed a list of pollution prevention opportunities. The following pollution prevention principles were considered at each facility and are presented in Table 1:

- Affirmative Procurement – Use alternative, safer, or recycled products.
- Reduce the amount of hazardous materials by implementing natural controls.
- Redirect storm water flows away from areas of concern.
- Reduce use of water.
- Reduce storm water flow across facility site.
- Recycle and reuse waste products and waste flows.
- Move or cover potential pollution from storm water contact.

<u>Action #2</u> - Develop a training program for City of Carlsbad staff on the requirements of their JURMP.

Pollution prevention eliminates or reduces the management of polluted storm water runoff. To achieve a successful pollution prevention program efforts such as cooperation among Municipal employees, staff training, public communication, and outreach programs need to be implemented. Table 2 uses information from Table 1 to further define pollution prevention methods required and how implementation will occur at each Municipal Facility.

Training will target staff based on the type of storm water quality and pollution issues that may be encountered during the performance of regular maintenance activities. Training may also target staff who perform activities in the following areas: drainage and flood control systems; streets, roads, parks, public landscaping, municipal wastewater collection systems, and corporation yards. The City will identify staff by March 2002 and begin training as shown in Table 2. A training goal of 70 percent for FY 2002-03, 80 percent for the FY 2003-04 year, and 90 percent for subsequent years is projected.

Staff will be trained in effective facility maintenance activities. Training may consist of informal "tailgate" meetings, formal classroom training, or self-guided training activities. Employees in targeted positions regarding the requirements of the storm water management program shall be trained annually. Training will be documented in the Public Works Department records.

Education of municipal staff will be discussed in Section 9 of this JURMP, as well as, appropriate sections within this component.

2.2 Source Identification

2.2.1 Purpose and Permit Requirements

Purpose

The purpose of this Permit requirement is to generate an inventory of Municipal Facilities to focus storm water quality efforts.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Municipal Component for Source Identification is as follows:

Section F.3.a.(2)
Each Copermittee shall develop, and update annually, a watershed based inventory of the name, address (if applicable), and description of all municipal land use areas and activities which generate pollutants. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

Jurisdictional URMP Requirements

The Permit requirement under the Municipal Component for Source Identification is as follows:

Section H.(2)(b)
A completed watershed-based inventory of all municipal land use areas and activities.

City Actions

1) Generate an electronic list using spreadsheet software and GIS map of municipal facilities by watershed.
2) Annually update list and map of municipal areas.

2.2.2 Source Identification Actions

Action #1 - Generate a list and GIS map of municipal areas by watershed.

The City has generated a watershed-based map using GIS technology. Figure 1 shows the location of each municipal facility by name and type of facility. A description of each municipal facility area and the activities that generate pollutants can be found in Table 3. The table shown below contains the definitions for the headings in Table 3.

Characteristic or Criteria	**Definition**
Facility	Municipal Facilities as provided by the City of Carlsbad and identified by regional maps.
Location	Address from City of Carlsbad/Thomas Guide or nearest street used as locator in placing the Facility within a GIS framework.
Watershed	The hydrologic unit within the Carlsbad watershed.
2001 Inspected	A thorough storm water review of the Facility was completed to generate the Municipal Section of the written JURMP for the City of Carlsbad. An Inspection Report was completed for these facilities identifying the potential pollutants, BMPs already implemented, and a list of BMPs recommended for implementation.
Type of Municipal Activity	Based on permit descriptions of covered municipal areas.
Generated Wastes	As listed in Permit Order No. 2001-01, Finding #7, Pollutant Types: Suspended solids Sediment* Nutrients (nitrogen and phosphorus fertilizers)* Pathogens (bacteria*, viruses, protozoa) Heavy metals (copper, lead, zinc, and cadmium) Petroleum products/PAHs Pesticides, Herbicides, PCBs Oxygen-demanding substances (decaying vegetation, animal waste) Trash *303(d) water bodies listed pollutants
High Priority (Permit)	Municipal Permit Order No. 2001-01, Section F.3.a.(3) lists the six (6) types of high priority municipal areas and activities. Currently three apply to the City of Carlsbad: 1. Roads, Streets, Highways, and Parking Facilities 2. Flood Control Devices 3. Municipal Waste Facilities (MS4 and Corporate Yards)

Action #2 - Annually update list and map of municipal areas.

The City will update this map annually to reflect any changes in location or additional municipal facilities. Changes will be identified in the Annual Report to the San Diego Regional Water Quality Control Board.

2.3 Threat to Water Quality Prioritization

2.3.1 Purpose and Permit Requirements

Purpose

The purpose of this Permit requirement is to prioritize importance of Municipal Facilities in terms of impact to storm water by developing criteria to rank and identify areas and activities that might affect storm water quality.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirements under the Municipal Component for Threat to Water Quality Prioritization are as follows:

Section F.3.a.(3)(a)
To establish priorities for oversight of municipal areas and activities required under this Order, each Copermittee shall prioritize each watershed inventory in F.3.a.2. above by threat to water quality and update annually. Each municipal area and activity shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality, each Copermittee shall consider (1) type of municipal area or activity; (2) materials used; (3) wastes generated; (4) pollutant discharge potential; (5) non-storm water discharges; (6) size of facility or area; (7) proximity to receiving water bodies; (8) sensitivity of receiving water bodies; and (9) any other relevant factors.

Section F.3.b.(3)(b)
At a minimum, the high priority municipal areas and activities shall include the following:

i. Roads, Streets, Highways, and Parking Facilities.
ii. Flood Management Projects and Flood Control Devices.
iii. Areas and activities tributary to a Clean Water Action section 303(d) impaired water body, where an area or activity generates pollutants for which the water body is impaired. Areas and activities within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vii of this Order).
iv. Municipal Waste Facilities.
- *Active or closed municipal landfills;*
- *Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;*
- *Incinerators;*
- *Solid waste transfer facilities;*
- *Land application sites;*
- *Uncontrolled sanitary landfills;*
- *Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles;*
- *Sites for disposing and treating sewage sludge; and*
- *Hazardous waste treatment, disposal, and recovery facilities.*

v. Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.
vi. Municipal airfields.

Jurisdictional URMP Requirements

The Permit requirements under the Municipal Component for Threat to Water Quality Prioritization are as follows:

Section H.(2)(c)
A completed prioritization of all municipal areas and activities based on threat to water quality.

City Actions

1) Complete a list of municipal areas and activities (95% accuracy goal).
2) Develop criteria to identify "high"priority areas as specified in Permit, Section F.3.a(3)(b).

2.3.2 Threat to Water Quality Prioritization Actions

<u>Action #1</u> - Complete a list of municipal areas and activities (95% accuracy goal).

The City of Carlsbad inventoried their municipal facilities and identified activities performed by municipal staff. The City's goal is to identify all municipal facilities and activities with the potential to affect storm water quality and maintain the list at an accuracy level of 95 percent. The slight margin of 5 percent allows for the transfer of properties due to sales or other arrangements. For example, since this list was finalized and audits of BMPs performed in December 2001, the City acquired an office building at El Camino Real and Faraday Avenue. The building is currently leased to the existing tenants. The 5 percent margin allows for these minor fluctuations in of the City's property inventory. A spreadsheet of those facilities and activities is provided in Table 3. Areas and activities under the direction of the City are included in the Table. This excludes leased lands for commercial use. Table 3 will be updated annually to reflect any changes or additions to Municipal facilities and/or activities. The changes will be presented in the Annual Report provided to the Principal Permittee.

Activities associated with the following prohibited discharges are listed in Table 3.

- Discharges into and from Municipal Separate Storm Sewer Systems (MS4s) in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in waters of the State of California.
- Discharges from MS4s, which cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater.
- Discharges into and from MS4s containing pollutants that have not been reduced to the maximum extent practicable (MEP).
- Postdevelopment runoff containing pollutant loads that cause or contribute to an exceedance of receiving water quality objectives or that have not been reduced to MEP for new or redevelopment projects.
- Discharges from MS4s subject to Basin Plan prohibitions (Appendix A of CAS 0108758).

Non-storm water discharges allowed (not contained in Table 3) as determined by the City of Carlsbad (unless tested as pollutant-containing) are:

- Diverted stream flows;
- Rising ground waters;
- Uncontaminated groundwater infiltration to MS4s;
- Uncontaminated pumped groundwater;
- Foundation drains;
- Springs;
- Water from crawl space pumps;
- Footing drains;
- Air conditioning condensation;
- Condensation water from cold water piping;
- Flows from riparian habitats and wetlands;
- Water line flushing;
- Landscape irrigation;
- Discharges from potable water sources other than water main breaks;
- Irrigation water;
- Lawn watering;
- Fire fighting flows necessary for the protection of life or property;
- Individual residential car washing; and

- De-chlorinated swimming pool discharges.

<u>Action #2</u> - Develop criteria to identify high priority areas as specified in Permit, Section F.3.a.(3)(b).

The City inventory of municipal areas and activities is provided in Table 3. The table lists each area by the following physical location, positioning references, and Permit requirements. Definitions or the source of the location, reference, or requirement are listed opposite each characteristic or criteria.

A priority ranking system was developed to identify "high, medium, and low" priority areas using the following criteria. Where the Permit did not specifically identify criteria limitations, other references were used. Table 4 contains the information on priority ranking using the following criteria.

A: Proximity

As defined in Section F.1.b.(2)(a)vii to 303(d) water bodies or Environmentally Sensitive Areas (Section F.1.b.(2)(a)vii of Order 2001-01).

Defined as: Distance from the water body (including tributaries)

0 = not applicable
1 = low (>1 mile);
3 = medium (approximately within 200 feet)
5 = high (direct discharge)

B: Activity or Area multiplied times Frequency

The Activity or Area is based on pollution potential and percent outdoors. Frequency is used to rank importance to the potential pollution that may be created and discharged.

<u>Area/Activity</u>

1 = No activities at this municipal facility were identified as likely to generate pollutants or were viewed as potentially polluting (e.g., Administrative Buildings with parking lots) or 0% of activities are outdoors.
3 = Storm water polluting activities occur at this facility or area is viewed as a potential polluting area should a 0.5-inch storm occur within the next 24 hours (e.g., Fleet Maintenance) or >0 to 50% of activities are outdoors.
5 = Non-storm water is originating from the area or activity and may carry pollutants to the storm drain (e.g., cleaning of reservoirs) or >50% of activities conducted are outdoors.

<u>Frequency</u>

1 = < 1 time per year
3 = at least 1/quarter
5 = at least 1/month

C: Pollutants

Based on the 303(d) water body pollutant list for the City of Carlsbad.

0 = none
1 = trash, debris
3 = petroleum, PAHs, chlorine, methylene blue active substances (MBAS)
5 = bacteria (pathogens), sediment, pesticides/herbicides, heavy metals, nutrients (fertilizers)

D: Pollutant Discharge Potential

Based on the implementation of current Best Management Practices (BMPs).

0 = none (fully contained)
1 = low (BMPs fully implemented);
3 = medium (BMPs implemented partially);
5 = high (No BMPs or BMPs not implemented)

E: Non-Storm Water Discharge

Based on the observed/known conditions.

0 = (fully contained)
1 = low. BMPs implemented to prevent or control non-storm water discharges (Spill and Pollution Prevention Training Program implemented, kits in place, operation and maintenance [O&M] program implemented).
3 = potential (non-Storm Water sources observed without BMPs implemented, but no discharge).
5 = observable/known non-storm water discharge occurs through interviews with City staff.

F: Parking Area

Based on Permit Order No. 2001-01 Section F.1.(2).(a)viii. Size of a Parking Facility AND the proximity to 303(d) water bodies or Environmentally Sensitive Areas (ESAs) that is expressed as a calculation provided below.

Parking lots with >5000 square feet or >15 spaces

0 = none
1 = No (<5000 square feet)
2 = Yes (>5000 square feet) AND

Proximity to 303(d)/ESA

1 = >1 mile;
= <200 feet; or
5 = directly discharging
CALCULATION: (Yes/No *Distance);

G: Drainage Area/Size

Based on Permit Order 2001-01, Section F.1.(b).(2).(a).iii and viii (Standard Urban Storm Water Management Plans [SUSMPs]).

1 = small (<5000 square feet);
3 = medium (>5000 - <100,000 square feet); or
5 = large (>100,000 square feet)

H: Land Use Surrounding Facility Area

Based on the percent impervious of the area surrounding the facility.

0 = Not Applicable (activity is fully contained) (infiltration capability except unobstructed)
1 = Open Space with Native Vegetation; (0% impervious)
2 = Recreational; (5 – 10% impervious)
3 = Residential; (10 – 20% impervious)
4 = Commercial; (20 – 50% impervious)
6 = Industrial; (50 – 70% impervious)
8 = Open drainage channel (concrete-lined or partially concrete-lined); (60 – 100% impervious)
10 = Active Construction (>80% pervious, but high potential to release sediment)

Ranking Ranking is a calculation representing the activities conducted at each facility to pose a potential threat to water quality. BMPs are not included in this calculation, but are incorporated in the following subsection. The calculation emphasizes the potential pollutant and area times frequency as follows:

Ranking = (A+(B*C)+D+E+F+G+H)where A through H are defined in the above section.

A high ranking is assigned if the calculation exceeds 40. A medium ranking is between 20 and 40. A low ranking is less than (<) 20. Rankings are based on type, location, and size where the categories are unitless and do not account for BMPs currently in place. The purpose of the ranking is to identify those municipal areas and/or activities that should be reviewed first for the potential to affect storm water quality. For the current year, the City of Carlsbad inspected the "High" priority facilities as specified in the Permit.

The City of Carlsbad will conduct annual inspections for facilities and/or activities listed as "High" priority using the Ranking System designed above. All remaining facilities in the "Medium" to "Low" ranking will be inspected as needed. See Section 2.7 for details on inspections.

A GIS-based map indicating the location of municipal areas greater than 0.25 acre within the City, owned by the City, and outside City limits is provided as the Map (Figure 1). Figure 1 meets the City's goal of 95% accuracy for listing municipal areas and activities with the potential to affect storm water quality. The City will update the ranking calculations annually and provide the change of ranking in the Annual Report submitted to the Principal Permittee.

Parking facilities were based on *Standard Urban Stormwater Mitigation Plan* requirements (>15 spaces) from the Permit. Table 5 lists parking facilities that are under maintenance of the City of Carlsbad.

2.4 Best Management Practices Implementation

2.4.1 Purpose and Permit Requirements

Purpose

The purpose of this section is to list the BMPs best suited for each priority category defined in Section 2.3 of this JURMP and develop schedule for implementation.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirements under the Municipal Component Best Management Practices Implemented are as follows:

Section F.3.a.(4)(a)
Each Copermittee shall designate a set of minimum BMPs for high, medium, and low threat to water quality municipal areas and activities (as determined under section F.3.a(3)). The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area or activity specific as appropriate.

Section F.3.a.(4)(b)
Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs (based upon the threat to water quality rating) at each municipal area or activity within its jurisdiction. If particular minimum BMPs are infeasible for any specific area or activity, each Copermittee shall implement, or require implementation of other equivalent BMPs. Each Copermittee shall also implement any additional BMPS as are necessary to comply with this Order.

i. Each Copermittee shall evaluate feasibility of retrofitting existing structural flood control devices and retrofit where needed.

Section F.3.a.(4)(c)
Each Copermittee shall implement, or require implementation of, any additional controls for municipal areas and activities tributary to Clean Water Act section 303(d) impaired water bodies (where an area or activity generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for municipal areas and activities within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.2.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.

Jurisdictional URMP Requirements

The Permit requirements under the Municipal Component for Source Identification and Threat to Water Quality Prioritization are as follows:

Section H.(2)(d)
Which BMPs will be implemented, or required to be implemented, for each priority category.

Section H.(2)(e)
How BMPs will be implemented, or required to be implemented, for each priority category.

City Actions

1) Develop a list of current and additional BMPs for each category of high, medium, and low priority municipal sites.
2) Develop a schedule for implementation of the upgrades to current and additional BMPs.
3) Present BMPs as an appendix to the JURMP.

2.4.2 Best Management Practices Implementation Actions

<u>Action #1</u> - Develop a list of current and additional BMPs for each category of high, medium, and low priority municipal sites.

Separate tables for Municipal areas were generated for each probable activity. The following areas are applicable to the City of Carlsbad. A spreadsheet of activities for each of the applicable areas was reviewed for Best Management Practices (BMPs) currently in place, BMPs needed, Capital Improvement Costs, and Schedule for Implementation. Selected BMPs must prevent or mitigate pollution generated from specific activities at the site. They may be selected based on information from the facility inspection or from activities from other City functions.

Tables 7 through 11 contain the following information for each Municipal area.

1. Maintenance Yards (Table 7)
   - Fleet
   - Parks
   - Streets
   - Water and Sewer

2. Roadways (Table 8)
   - Streets
   - Roads
   - Highways

3. Storm Drain System (Table 9)
   - Catch/Inlets Basins
   - Brow ("V") Ditches
   - Culverts

4. Parks (Table 10)
   - Parks
   - Recreation Areas
   - Open Spaces
   - Beach Access
   - Medians
   - Athletic Fields
   - Greenways

5. Other Municipal Activities (Table 11)
   - Potable Water Systems
   - Flood Control
   - Police Pistol Range
   - Sanitary Sewer Systems
   - Administration Buildings

BMPs from the California Department of Transportation, State Water Resources Control Board Phase II Requirements, and U.S. Environmental Protection Agency were used to address the reduction and

minimization of pollution from affecting storm water quality and eventually receiving waters. Copies of the BMPs are provided in Appendix C of this JURMP.

Additional BMPs may be necessary to meet the City goal of minimizing and reducing pollutants from entering the storm drain system. One such BMP is provided as follows:

- Storm Water Pollution Prevention Plan (SWPPP) (Chapter for each Municipal Facility Business Plan for each of the current 5 Municipal facilities)

  A SWPPP will contain the following:

  1. Site Map.

     Prepare a site map of the facility. This can be prepared from existing "as-built" or other construction plans of the yard, or similar drawings prepared for other programs. Features displayed on the map should include:

     a) An outline of the entire property
     b) Drainage areas on the property and direction of flow
     c) Areas of soil erosion
     d) Nearby water bodies and municipal storm drain inlets.
     e) Location of storm water conveyance systems (ditches, inlets, storm drains, etc.)
     f) Location of existing storm water controls (oil/water separators, sumps, etc.).
     g) Location of "impervious" areas--paved areas, buildings, covered areas
     h) Locations where materials are directly exposed to storm water
     i) Locations where toxic or hazardous materials have spilled in the past
     j) Location of buildings and activity areas (e.g., fueling islands, garages, waste container area, wash racks, hazardous material storage areas, etc.)

  2. Significant Materials.

     Complete an inventory of materials at the site, indicating where they are stored or handled and the typical amount on site. The materials inventory can be built from existing similar inventories prepared for other programs.

  3. Potential Pollutant Sources.

     Write a description of activities that take place at the facility, the potential pollutant sources from the activities, and the pollutants that could be discharged. Activities that may be identified include lubricating, fueling and washing vehicles/equipment; stockpiling materials; mixing fertilizers or pesticides; warehouse receiving/shipping; and sandblasting, stripping, and painting. Any nondischarges should be recorded here (such as rinse water, wash water, boiler blowdown). A note should also be made about previous "significant" spills of toxic or hazardous materials including the type, quantity, cleanup methods used, amount of material remaining, and measures taken to ensure it does not recur.

4. Assessment of Potential Pollutant Sources.

   For the activities and pollutant sources noted above, determine which areas are probable sources of pollutants and state the corresponding pollutants likely to be present in discharges.

<u>Action #2</u> - Develop a schedule for implementation of the upgrades to current and additional BMPs.

The City will implement BMPs to reduce or eliminate the discharge of untreated storm water runoff to the storm drain system from material storage areas, non-storm water discharges, municipal operations and maintenance activities, and other areas as listed in Tables 7 through 11. These tables connect municipal activities to specific BMPs. Activities were ranked high, medium, and low based on the pollutants listed in the Permit and are connected to Tables 3 and 4 by municipal area. BMPs were assigned based on the pollutant it was designed to control.

Each table represents a municipal area (e.g., Streets and Roadways, and Parking Facilities). Activities are listed for each area and are specifically redundant throughout the Tables since activities are not unique to a Municipal area. The Tables will be distributed to the City's work groups performing the activities listed. Once the Tables are distributed to appropriate Municipal Divisions, implementation follows. Implementation may be done through purchasing of equipment and resources and training employees in storm water procedures. Many procedures involve moving materials under cover, posting signs describing how to address spills, installing spill kits, and conducting training activities necessary to implement the BMPs.

The Tables also include a schedule for meeting the requirements, implementing the necessary BMPs, and improving the quality of receiving waters within the City's jurisdiction. Schedules are provided to coincide with Permit reporting requirements and fiscal years for purchasing capital improvements. Goals are provided as percentages and will be used to measure and document success in the Annual Report.

The effectiveness of BMPs will be evaluated annually. In response to Section F. 3. 9. (1) (c), additional controls, if warranted, will be implemented for municipal areas and activities tributary to Clean Water Act section 303 (d) impaired waters or other receiving waters within environmentally sensitive areas.

<u>Action #3</u> – Present BMPs as an Appendix to the JURMP.

BMPs are crucial to the success of runoff control in growing urbanized areas. BMPs are structural and nonstructural and are often the decisive factor in determining the effectiveness of improving storm water quality. Planning and designing a project includes reviewing, generating, and incorporating BMPs completely and accurately to receive the maximum benefit. The use of BMPs is an ever-changing process. New technologies and creative uses of simple applications could result in a "check and balance" with regulatory requirements

BMPs currently in use and suggested for implementation are contained in Appendix B. Impacts at the origin and along the path are considered when evaluating which BMP(s) will be most effective. The City recognizes the sensitivity of receiving water bodies and has elected to implement the appropriate BMPs regardless of ranking.

An annual review of BMPs for Municipal areas and activities will consider new technologies and whether effectiveness is increased by updating or enhancing the practices. The results of these continuing assessments will be reported in the JURMP Annual Report.

2.5 Maintenance of Municipal Separate Storm Sewer System (MS4)

2.5.1 Purpose and Permit Requirements

Purpose

The purpose of this section is to identify those maintenance activities of the MS4 or stormwater conveyance system that reduce the potential of pollutant discharge. Scheduling maintenance activities will minimize or reduce the potential for pollution.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Municipal Component Maintenance of Municipal Separate Storm Sewer System (MS4) is as follows:

Section F.3.a.(5)(a)
Each Copermittee shall implement a schedule of maintenance activities at all structural controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.

Jurisdictional URMP Requirements

The Permit requirement under the Municipal Component for Source Identification and Threat to Water Quality Prioritization is as follows:

Section H.(2)(f)
Municipal maintenance activities and schedules.

City Actions

1) Identify Copermittee's maintenance activities of the MS4 and related structures.
2) Develop a maintenance schedule.

2.5.2 Maintenance of Municipal Separate Storm Sewer System (MS4) Actions

<u>Action #1</u> - Identify Copermittee's facility operations and maintenance activities.

The City has five (5) general structures within the MS4 as follows:

- Catch Basins/Inlets
- Curbed Streets
- Uncurbed Roads
- Open Drainage facilities
- Desiltation Basins

The maintenance activities associated with each of these general structures are listed in Table 9. Included in Table 9 are BMPs currently in place and recommended for incorporation to prevent, reduce, or minimize impacts to receiving waters.

When maintenance activities are contracted, the City will require the maintenance contractors to implement drainage facility BMPs by including the appropriate language in contracts and purchase orders. The City may conduct spot checks of the maintenance contractor to assess if drainage facility maintenance BMPs are being implemented as written. BMPs are contained in Appendix B and should be provided to subcontractors, as appropriate.

<u>Action #2</u> - Develop a maintenance schedule.

Catch Basins/Inlets

The Street Maintenance Division checks and cleans, if necessary, every catch basin/inlet annually. The City currently lists approximately 3,500 catch basins/inlets in its jurisdiction and divides the City into four quadrants for the inspection process. A set criteria is used to prioritize the inspection process with an emphasis placed on those catch basins in high traffic areas. Based on a prioritized listing of catch basins, two-person crews will be assigned to each of the four quadrants to complete inspections. If during inspection, the facility is observed to have flow impeded with any obstruction, cleaning of the facility will be required. Any debris (lumber, sticks, rocks, etc.) is removed with an inlet plucker from ground level. Further cleaning by a vactor truck or a three-person crew is assigned at a later date. Operation and maintenance staff will be informed of the observations during inspection and cleaning to schedule additional cleaning within a timely manner. The amount of debris removed (measured in cubic yards) will be documented in the operation and maintenance records for annual program assessment. Reinspections of high traffic areas will also be scheduled. An 80% goal is projected for the FY 2002-03 with an increase to 90% for the remaining Permit years.

Solids and debris removed from the catch basins/inlets will be stored at an approved, tarp-covered site for dewatering purposes and testing. Disposal of the collected solids is at an approved dumpsite. Records of debris volume, cost to dispose, and test results will be maintained by the Street Maintenance Division (See attached Catch Drain Cleaning & Maintenance Form).

A baseline of effort level, number of catch basins/inlets inspected and cleaned, and the amount of debris removed is from the previous permit year 1999-2000. This baseline will be used in the program assessment for Permit year 2001-2002.

The following catch basin areas are under consideration for potential structural BMPs:

Carlsbad Boulevard:	Mountain View to Warm Water Jetty (34 inlets)
State Street (plus alleys):	Carlsbad Village Drive to north end (13 inlets)
Grand Avenue:	Ocean Street to Jefferson (7 inlets)
Laguna Drive:	State Street to Jefferson (3 inlets)
Carlsbad Village Drive:	I-5 to Ocean Street (18 inlets)
Ocean Street:	Mountain View offshore parking lot (12 inlets)
La Costa Avenue:	I-5 to El Camino Real (17 inlets)
Jefferson Street:	Laguna Drive to Marron Road (5 inlets)
Batiquitos Drive:	Poinsettia Lane to Aviara Parkway (26 inlets)
Paseo del Norte:	Cannon Road to Camino Del Parque (11 inlets)
Cannon Road:	Carlsbad Boulevard to Faraday Avenue (29 inlets)

Results of this targeted structural BMP evaluation will be provided in the first JURMP Annual Report.

Curbed Streets and Uncurbed Roads

The City of Carlsbad has determined a cleaning schedule for public streets with curbs and/or berms in the permit area within their jurisdiction. Street sweeping is conducted by subcontractors who will be trained in collection, management, disposal of swept materials, and cleaning of the sweeping equipment. The identified streets will be swept, at a minimum, in accordance with the schedule that includes:

- three times per week in the Downtown Village Area.
- a weekly average not less than one time per week in heavy, downtown traffic areas as noted below:

El Camino Real:	Haymar Drive to southern City limits
Palomar Airport Road:	Carlsbad Boulevard to eastern City limits
La Costa Avenue:	I-5 to Rancho Santa Fe Road
Paseo del Norte:	Cannon Road to Palomar Airport Road (3 to 5 a.m. post)
Tamarack Avenue:	Carlsbad Boulevard to Carlsbad Village Drive
Marron Road:	Highway 78 to El Camino Real

- a monthly average not less than two times per month in alleys, residential areas, and commercial streets;
- major roads one time per week.

To increase the efficiency of the street sweeping, temporary “no stopping” and “no parking” signs, or permanent street sweeping signs will be posted, and/or the street sweeping schedule will be available on the City’s website during scheduled cleanings. Streets will be inspected to see if the scheduled sweeping is sufficient clean and minimize storm water pollution.

The City of Carlsbad will determine an inspection schedule to conduct trash collection along or in improved open channels within its jurisdiction. At a minimum, the schedule will include the inspection of streets at least once each year prior to the wet season. Seasonal conditions will also be considered when scheduling street sweeping activities. Results of the Dry Weather Monitoring Program will also be summarized and forwarded to the Storm Water Division of the City for additional followup of areas identified as potentially in need of additional cleaning, maintenance, or repairs.

Open Drainage Facilities
The City of Carlsbad shall establish an ongoing regular voluntary program for the collection of debris and trash in natural stream channels. The following concrete channels shall be cleaned annually prior to the wet season on October 1.

- Buena Vista Channel
- Kelly Drive Channel
- Park and Kelly Outfall
- Park and Andrea Outfall
- Park and Valencia Outfall
- Park and Neblina Outfall

Other open drainage outfalls will be cleaned on an as-needed basis.

Desiltation Basins

Three (3) desiltation basins are the responsibility of the City of Carlsbad. Their locations are as follows:

Desiltation Basin #13 (23,000 square feet) - SW end of Faraday Avenue, south of Lot 102 of CRC
Desiltation Basin #43 (50,000 square feet) - Camino Hills and Faraday, NE corner
Desiltation Basin # 30 (1,500 square feet) - SW corner of Marron and Monroe (maintenance completed by the May Company)

Basins are inspected and cleaned as developed in the Master Drainage Plan for the City of Carlsbad (Currently undergoing revision). A checklist is used to document the inspection and follows this subsection.

Many of the desiltation basins within the City are owned and operated by private institutions. The City will coordinate inspections, maintenance, and record-keeping with the owners of these basins. The City proposes to educate the owners by February 2003.

CITY OF CARLSBAD
DESILTATION BASIN SUMMARY SHEET

DESILTATION BASIN NUMBER: _____

LOCATION: _____

CONDITION: _____ DATE: _____

I. BASIN FIELD STATISTICS
- A. Landscaping surrounding Basin? _____
- B. Landscape Irrigation System? _____
- C. Habitat Exists? _____
- D. Existing Plant Species in Basin?
  - 1. Cattails (*Typha Latifoili*) _____
  - 2. Pampas Grass (*Cortaderia Selloana*) _____
  - 3. Sycamore (*Platanus Racemosa*) _____
  - 4. Other Plants _____
- E. Standing Water in Basin? _____
- F. Strong Odors of Gas, Oil, Sewer? _____
- G. Maintenance Easement? _____
- H. Type of Easement _____

II. MAINTENANCE PROGRAM
- A. Frequency of Debris Removal? _____
- B. Date Last Cleaned? _____
- C. Date Last Checked? _____
- D. Landscape Maintenance required? _____
- E. Fencing and repair? _____
- F. Irrigation system need repair? _____
- G. Date last photographed? _____
- H. Weed abatement completed? _____
- I. Visible Erosion? _____
- J. Signs of Illegal Dumping? _____
- K. Permit requirements? _____
- L. Traffic control requirements? _____

III. COMMENTS

_____

_____

_____

_____

_____

_____

CITY OF CARLSBAD
STORM DRAIN CLEANING & MAINTENANCE

LOCATION: _____

(address, street, nearest intersection)

DATE: TYPE OF STORM DRAIN: _____

(inlet, catch basin, culvert, manhole, pipeline)

DATE LAST INSPECTED: _____

DATE LAST CLEANED: _____

CONDITION OF STORM DRAIN:

☐ GOOD	(Flow would not be hindered. Drain undamaged - No Cleaning or Maintenance required) (CIRCLE Applicable Condition)
☐ FAIR	(Flow would be hindered some - Cleaning required or Drain partly damaged - Maintenance required) (CIRCLE Applicable Condition)
☐ POOR	(Flow would be impaired or blocked - Cleaning required immediately or Drain damaged/not functional - Maintenance required immediately) (CIRCLE Applicable Condition)

CORRECTIVE ACTION:
- ☐ CLEANED Storm Drain
- ☐ REPAIRED Storm Drain
- ☐ REFERRED to Another Agency/Subcontractor

OBSERVATIONS:
- ☐ ODORS (Petroleum; Sewer; Other) (CIRCLE Observation)
- ☐ VISUAL (Sheen; Floating material; Silt; Debris) (CIRCLE Observation)

MATERIAL REMOVED (Total): AMOUNT _____ lbs (Pounds estimated)

MATERIAL TYPE(S):

_____%	SEDIMENT/SILT
_____%	SEWAGE
_____%	TRASH (Paper, cups, plates, plastics)
_____%	PETROLEUM PRODUCTS
_____%	DEBRIS (Wood, leaves, rocks)
_____%	OTHER ____

COMPLETED BY: DEPARTMENT _____

CREW _____

COMMENTS/COMPLICATION_____

_____

2.6 Management of Pesticides, Herbicides, and Fertilizers

2.6.1 Purpose and Permit Requirements

Purpose

The purpose of this section of the Municipal component is to define a management scheme for the use, application, and disposal of pesticides, herbicides, and fertilizers.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Municipal Component for Management of Pesticides, Herbicides, and Fertilizers is as follows:

Section F.3.a.(6)
The Copermittees shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from municipal areas and activities to MS4s. Important municipal areas and activities include municipal facilities, public rights-of-way, parks, recreational facilities, golf courses, cemeteries, botanical or zoological gardens and exhibits, landscaped areas, etc.

Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications, and other measures for municipal applicators and distributors; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) schedules for irrigation and chemical application; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

Jurisdictional URMP Requirements

The Permit requirement under the Municipal Component for Management of Pesticides, Herbicides, and Fertilizers is as follows:

Section H.(2)(g)
Management strategy for pesticides, herbicides, and fertilizer use.

City Actions

1) Develop a list of municipal areas where pesticides, herbicides, and fertilizers are applied.
2) Identify BMPs for each of these municipal areas to include education, nonchemical applications, native vegetation, schedules for irrigation and application; and management of unused products.

2.6.2 Management of Pesticides, Herbicides, and Fertilizers Actions

<u>Action #1</u> - Develop a list of municipal areas where pesticides, herbicides, and fertilizers are applied.

A list of parks, athletic fields, greenways, and other maintained areas is provided as Table 11 and described below.

Parks/Landscaping/Civic Greenways/Beach Access/Athletic Fields – The City of Carlsbad Park Maintenance Division is responsible for maintaining, preserving, and enhancing over 300 acres of park facilities, school athletic fields, beach accesses, and landscapes at various civic facilities. This includes the maintenance of 8 community parks and 26 special use areas. In addition, the Park Maintenance Division manages over 625 acres of open space/undeveloped areas that includes trash removal, cleanup, and weed abatement.

Trees – The City of Carlsbad maintains over 15,000 trees in the City rights-of-way. The maintenance consists of pruning, planting, removal, and root pruning. The Street Tree Maintenance Division is responsible for over 500 street tree work order/requests per year. The division also inspects tree removal requests from the public.

Medians – The City of Carlsbad Median Maintenance Division maintains nearly 100 acres of landscaped medians. Maintenance includes litter removal, weed abatement, pruning, planting, pesticide application, and irrigation repair/adjustment.

<u>Action #2</u> - Identify BMPs for each of these municipal areas to include education, nonchemical applications, native vegetation, schedules for irrigation and application, and management of unused products.

Education – Education of Public Works staff is the first step in reducing or eliminating the use of pesticides, herbicides, and fertilizers. A training program for Municipal, Procurement, and the Public Works Department staff will include identifying and defining chemicals used by the City of Carlsbad, proper handling, appropriate use/application by staff and subcontractors, storage, disposal, irrigation, and nonsynthetic alternatives.

Nonchemical applications – Some pest problems can be eliminated or controlled by handpicking, pruning, or spraying with water. Many pest problems can be reduced or eliminated by removing affected leaves or plant parts. Safer alternatives to traditional chemical pesticides include insecticidal soaps, horticultural oils, and products containing a bacterium called Bacillus thuringiensis.

Native Vegetation – The use of native vegetation enhances the natural environment.

Schedules for Irrigation and Application – Irrigation is generally scheduled between the hours of 10:00 p.m. and 6:00 a.m. This minimizes misting and evaporation for more effective irrigation. It also minimizes the chance of public contact. Watering twice within 60 minutes at 5 to 7 minutes each time is more effective in saturating deeply into soils and minimizes runoff due to soil densities. Thinning of overgrowth on civic greenways, athletic fields, and parks increases the effectiveness of irrigation, allowing water to seep into soils rather than run off from thatched grasses.

Management of Products (Used and Unused)
When chemical applications are necessary and other nonsynthetic forms do not produce adequate results, a protocol for consistent application of pesticides, herbicides, and fertilizers will be used. Basic standardized protocol for the application of pesticides, herbicides (including preemergents), and fertilizers is provided in the attached Pesticide, Herbicide, Fertilizer Protocol. A routine application pertains to scheduled times of application to keep pests from returning or to maintain green lawned areas. A nonroutine application is a nonscheduled application due to an infestation of atypical pests; vandalism of greenways; or diseased trees, shrubs, or grasses. Unused product follows the California Environmental Protection Agency Department of Pesticide Regulations.

Staff or subcontractors applying pesticides must be either certified by the California Department of Food and Agriculture, or under the direct supervision of a certified pesticide applicator. Protocols for handling, mixing, storing, and disposing of used/unused pesticides/herbicides/fertilizers will be in accordance with the California Environmental Protection Agency Department of Pesticide Regulation. A copy of the regulations will be kept on-site where these chemicals are stored.

The following BMPs are listed for use by the listed municipal areas.

Municipal Area	**BMPs currently implemented for handling, applying, storing, and disposing of pesticides, herbicides, and fertilizers**	**BMPs to be considered to reduce or minimize pesticides, herbicides, and fertilizers from entering the storm drain system**
Parks Recreation Areas Medians/Open Spaces Greenways/Open Spaces Civic Areas Athletic Fields Beach Access Trees Landscaping	1. Pesticides and Herbicides are applied in accordance with the California Department of Pesticides requirements as applicable.	1. Irrigation System Check for overflows into storm drain and from treated areas into storm drain via streets and gutters (see E3b - Appendix B).
	2. Pesticides are purchased in small (less than 5-gallon amounts).	2. Irrigation Time Check.
	3. Manufacturer's label requirements are used.	3. Use of nonsynthetic fertilizers (Alternative Safer Products).
	4. Dispose of organic materials in designated containers as solid waste.	4. Manually remove diseased and dying plants, branches, and leaves.
	5. Mix the right amount of chemical at the right strength to use all of the solution.	5. Replace with native vegetation when practical.
	6. Dedicate application equipment to minimize the rinsing of containers.	6. Use insecticidal soaps or horticultural oils if possible.
		7. Store fertilizers separate from pesticides and herbicides. Fertilizers are oxidizers that could react with other chemicals.
		8. Apply chemicals when public exposure is minimized.
		9. Train Municipal, Public Works, and Procurement staff on storm water issues.

2.7 Inspection of Municipal Areas and Activities

2.7.1 Purpose and Permit Requirements

Purpose

The purpose of this section of the Municipal component is to develop an inspection protocol for areas and activities that have a high potential for affecting storm water quality.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Municipal Component for Inspections of Municipal Areas and Activities is as follows:

Section F.3.a.(7)
At a minimum, each Copermittee shall inspect high priority municipal areas and activities annually. Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

Jurisdictional URMP Requirements

The Permit requirements under the Municipal Component for Inspections of Municipal Areas and Activities are as follows:

Section H.(2)(h)
Planned inspection frequencies for the high priority category.

Section H.(2)(i)
Methods for inspection

City Actions

1) Develop a list of municipal areas and activities with high priority for affecting storm water quality.
2) Develop an inspection checklist for these high priority areas and activities.
3) Develop a schedule for inspection.
4) Develop a plan for corrective actions.
5) Annually inspect high priority municipal areas and activities.

City of Carlsbad - Parking Lot Inspections

Location:

_____

Parking Lot is: (circle) paved gravel other
Time of Day:
Percent (%) of Parking Lot in Use:

1. Parking lot is for facility occupants and visitors only?
   (If Yes, complete following questions. If No, can it be reasonably ascertained how many spaces belong to the facility? If No, then stop inspection.)
2. Parking lot contains more than 15 spaces?
3. Parking condition is good? (Few cracks, gaps, and loose pieces of asphalt)
4. Parking needs repair before the next rain?
5. Parking surface is not stained with leaks from cars and/or equipment?
6. Parking lot does not show signs of run-on from another business/facility? (no run-off stains, no sediment drainage)
7. Parking area is not littered with trash and debris?
8. Parking area contains litter/trash cans?
9. Parking lot is surrounded on the downgradient side with landscaping?
10. Parking lot is surrounded with impervious surface on the downgradient side?
11. Parking lot landscaping is in good condition and healthy?
12. Parking lot landscaping includes grass that is being maintained (mowed, green)?
13. Parking lot contains a storm drain?
14. Nearest storm drain is in the street outside of the parking lot?
15. Nearest storm drain is downgradient from the parking lot run-off?
16. A vehicle repair/fueling/wash facility is part of or upgradient from the parking lot?
17. A restaurant alley/wash area is part of or upgradient from the parking lot?
18. Open soil areas (tree wells) are part of or upgradient from the parking lot?

City of Carlsbad – Public Works

Inspection Checklist
Storm Water Quality Management Program
Page 1 of 2

Site: _____ Date: _____

Facility Type: _____ Inspector: _____

	OK	Not OK	NA	Action
1. Maintain a storm water quality program as part of the Facility Business Plan (FBP). Identify a Storm Water Coordinator for the facility. Post the person's name and phone number in a visible place to all staff. Complete the Storm Water Checklist at least quarterly, with more frequent inspections during the rainy season (October 1 through April 15) at a frequency determined by the facility.	☐	☐	☐	☐
2. Establish a Pollution Prevention Program. Develop Spill Prevention Procedures for Staff in both English and Spanish. Post procedure in a visible area where spills might occur. Keep Material Safety Data Sheets available to all staff. Document whenever a spill occurred and the circumstances leading to the spill that could be prevented.	☐	☐	☐	☐
3. Identify Pollutant Sources and reduce or eliminate whenever feasible. Post the list of pollutants at the facility, reference a Material Data Safety Sheet (if available), and the source of the pollutant. Investigate the use of Alternative "Green" products to eliminate the source of the pollutant.	☐	☐	☐	☐

City of Carlsbad – Public Works

Inspection Checklist
Storm Water Quality Management Program

	OK	Not OK	NA	Action
4. BMP Implementation Keep Best Management Practices (BMPs) used at the facility in a 3-ring binder available to all staff. Update the BMP list as conditions at the facility change. Inspect and maintain BMPs using the Storm Water Checklist.	☐	☐	☐	☐
5. Storm Water Quality Training Storm Water Quality is everyone's responsibility. Train staff during daily tail-gate meetings, monthly updates during the rainy season, and keep awareness at a high level during dry season for non-storm water discharges. Install a "storm water quality suggestion box" for employees to suggest improvements to the Storm Water Quality Program, BMPs, and training exercises.	☐	☐	☐	☐
6. Storm Water Quality Program Assessment The Storm Water Quality Program is "OK" if items 1, 2, 3, and 4 are "OK".	☐	☐	☐	☐

2.7.2 Inspection of Municipal Areas and Activities Actions

<u>Action #1</u> - Develop a list of municipal areas and activities with high priority for affecting storm water quality.

Table 4 contains the list of municipal areas with high priority ranking for affecting storm water quality.

<u>Action #2</u> - Develop an inspection checklist for these high priority areas and activities.

From the information contained in Table 4, the City of Carlsbad has identified the following municipal areas categories as high priority. The activities with high priority are listed in Tables 6 through 11.

- Municipal Yards
- MS4 Systems
- Parks
- Parking Facilities

Checklists to inspect the various categories of Municipal areas are provided following this subsection.

<u>Action #3</u> - Develop a schedule for inspection. Annually inspect all high priority municipal areas and activities.

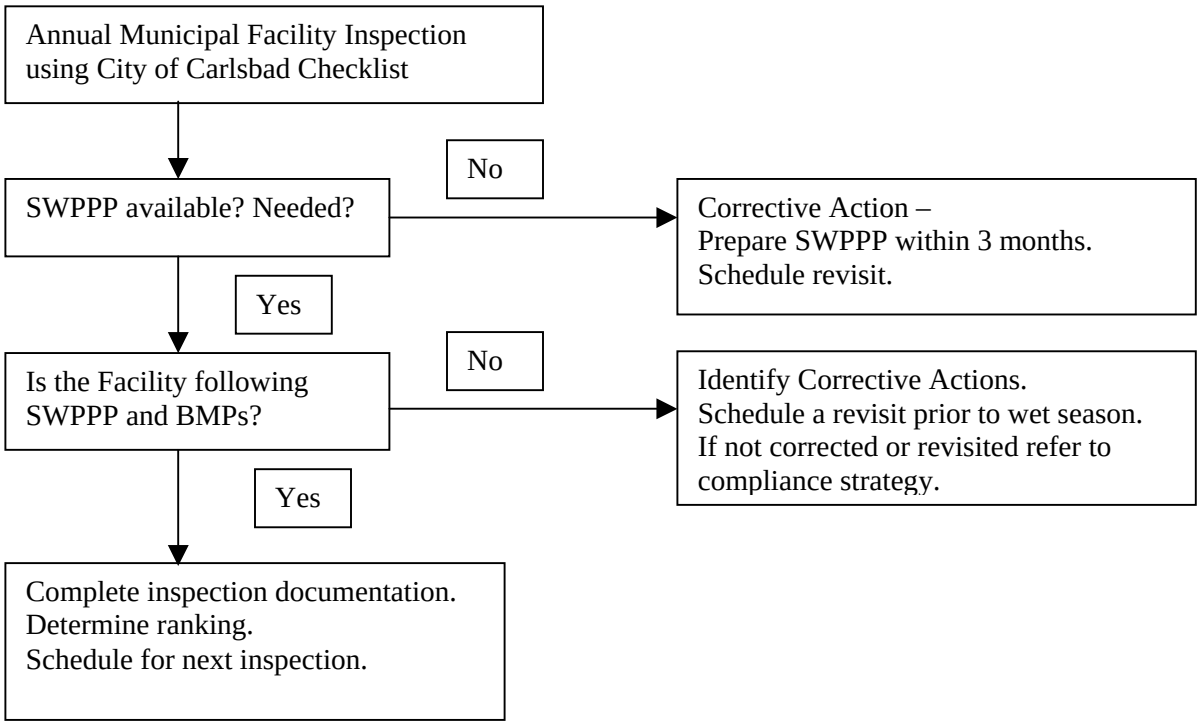
Table 4 lists a schedule for inspections for each Municipal area. The high priority areas specified in the Permit and calculated as "High" during each of the Permit years will be inspected annually. Medium and low priority areas will be inspected as needed.

<u>Action #4</u> - Develop a plan for corrective actions.

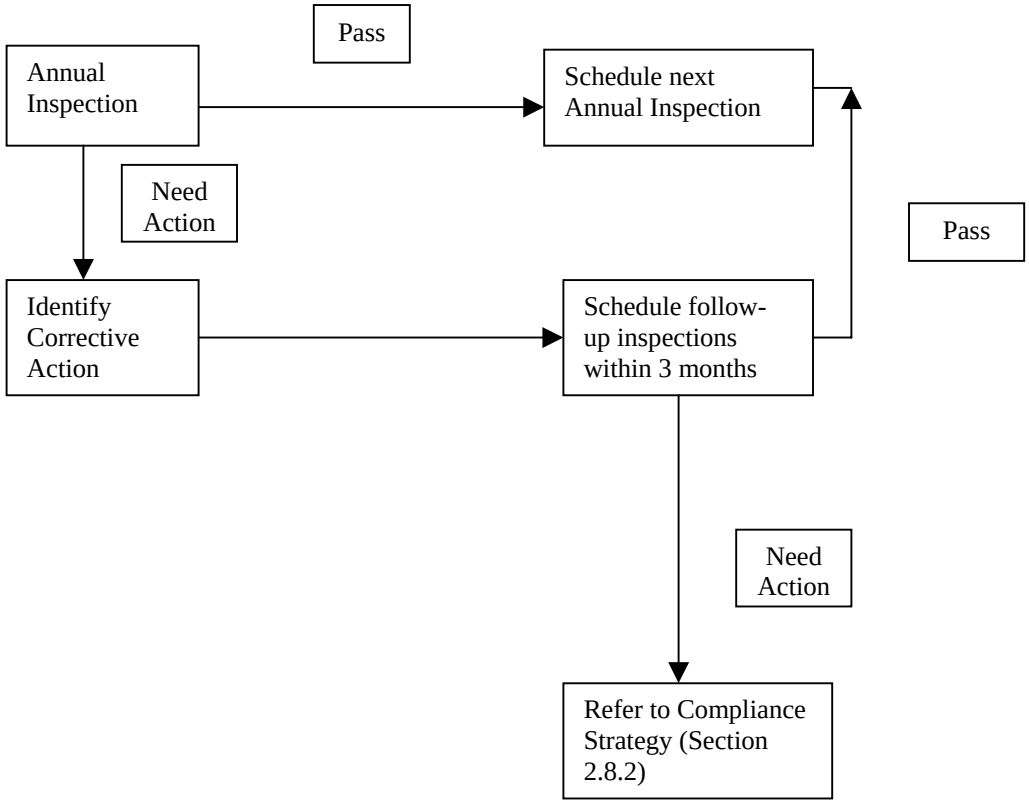
Based on each facility's specific activities, the City will develop storm water pollution controls for each facility. The storm water pollution prevention plan (SWPPP) will be a chapter in each facilities' Business Plan. The SWPPP will contain the information listed above, identify potential pollutants and sources, and outline applicable BMPs.

Facility inspections will be conducted annually for each facility to determine if the storm water controls are being implemented and effective. Specific BMPs within the municipal facility that are not working as intended or properly implemented will be noted and brought to the attention of the corresponding maintenance staff. Facilities needing improvement will be rescheduled for another inspection within the same year to check if modifications have been implemented.

If problems are found during the maintenance yard inspection, the inspector and maintenance staff will determine whether operation and maintenance activities require changes in order to comply with the storm water pollution controls or if the controls need to be revised to be more effective. If so, these operational and maintenance changes will be prioritized and implemented and the SWPPP within the Business Plan revised.


Annual Municipal Facility Inspection using City of Carlsbad Checklist
SWPPP available? Needed?
No
Corrective Action – Prepare SWPPP within 3 months. Schedule revisit.
Yes
Is the Facility following SWPPP and BMPs?
No
Identify Corrective Actions. Schedule a revisit prior to wet season. If not corrected or revisited refer to compliance strategy.
Yes
Complete inspection documentation. Determine ranking. Schedule for next inspection.

The overall scheme for inspection activities is shown below.



2.8 Enforcement of Municipal Areas and Activities

2.8.1 Purpose and Permit Requirements

Purpose

The purpose of this section of the Municipal component is to define the compliance strategies associated with noncompliance of the Permit, City Ordinance, or JURMP requirements.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirement under the Municipal Component for Enforcement of Municipal Areas and Activities is as follows:

Section F.3.a.(8)
Each Copermittee shall enforce its storm water ordinance for all municipal areas and activities as necessary to maintain compliance with this Order.

Jurisdictional URMP Requirements

The Permit requirement under the Municipal Component for Enforcement of Municipal Areas and Activities is as follows:

Section H.(2)(j)
A description of enforcement mechanisms and how they will be used.

City Compliance Actions

1) Generate a list of enforcement mechanisms for each type of Municipal area or activity requiring a compliance strategy.
2) Develop a flow diagram of how each enforcement mechanism will be applied.

2.8.2 Enforcement of Municipal Areas and Activities Actions

<u>Action #1</u> - Generate a list of enforcement mechanism for each type of Municipal area or activity requiring a compliance strategy.

City of Carlsbad inspectors should conduct follow-up inspections to determine if corrective actions have been implemented according to the City's ordinances and minimum BMP requirements. Escalating enforcement steps, providing flexibility for the inspectors to establish appropriate compliance strategies and time frames on a case-by-case basis, should be used to ensure compliance.

*If a significant and/or immediate threat to water quality is observed by a City of Carlsbad's inspector, action should be taken to require the facility owner and/or operator to immediately cease the discharg*e. Runoff from municipal facilities may pose a threat to water quality if a BMP is not in place or if a BMP fails. The typical progressive enforcement steps that the City of Carlsbad can apply to see compliance of municipal facilities are as follows:

(a) Verbal or Written warnings;
(b) Notice of Violation;
(c) Compliance Schedules;
(d) Cease and Desist Orders or Stop Work Orders.

A discussion of these measures is provided below. These measures are tools the City may use to enforce its permit and ordinance requirements upon itself.

1. <u>Verbal and/or Written Warnings</u>

A common method of requesting corrective action and enforcing compliance is a verbal warning from the City's inspector to the municipal facility operator. Verbal warnings are often sufficient to achieve correction of the violation, often while the inspector is present at the facility. After notifying the owner or operator of the violation, the inspector should document the violation and notification in the inspection file. A specific time frame for correcting the problem and a follow-up inspection date should be documented by the inspector. In judging the degree of severity, the City inspector may also take into account any history of similar or repeated violations at the facility in order to determine if re-inspection is warranted.

2. <u>Notice of Violation</u>

If the verbal warning is effective or if the severity of the violation is such that a verbal warning may not result in compliance, a written notice of violation should be issued. The written notice should describe the infraction, corrective actions, time frames for correction, and notification of a follow-up inspection. A copy of the notice should be given to the appropriate manager and placed in the active inspection file. If the violation is corrected, to the satisfaction of the inspector on re-inspection, the inspector will document compliance in the inspection file.

3. <u>Compliance Schedules</u>

A compliance schedule may be issued to ensure that violations are corrected by specific deadlines.

4. <u>Cease and Desist Orders or Stop Work Orders</u>

A City inspector may issue an order to cease and desist a discharge, practice or operation that is occurring or is likely to take place in violation of the City ordinance. The inspector may direct the responsible party to take appropriate remedial or preventive action to prevent the violation form recurring. Whenever any work is being done contrary to the provisions of the City ordinance, the City inspector may issue a written order that the work be stopped until further notice.

<u>Action #2</u> - Develop a flow diagram of how each enforcement mechanism will be applied.